Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-34. (Canceled)

35. (Currently amended) A method of depositing a uniform coating on a surface of a non-planar substrate, the method comprising the steps of:

a) providing the non-planar substrate having the surface to a deposition chamber;

b) evacuating the deposition chamber to a predetermined deposition pressure;

c) generating a plurality of plasmas from at least one array of a plurality of plasma sources;

d) injecting at least one reactant gas into each of the plurality of plasmas such that a first flow rate of the at least one reactant gas into a first plasma is different from a second flow rate of the at least one reactant gas into a second plasma;

e) flowing the at least one reactant gas and the plurality of plasmas into the deposition chamber toward the non-planar substrate; and

f) reacting the at least one reactant gas with each of the plurality of plasmas to form the uniform coating on the surface of the non-planar substrate.

36. (Original) The method according to Claim 35, wherein at least one of the plurality of plasma sources is an expanding thermal plasma source having a cathode, an

anode, and an inlet for a non-reactive plasma source gas disposed in a plasma chamber that is in fluid communication with the deposition chamber.

37. (Currently amended) The method according to Claim 36, wherein the step of flowing the at least one reactant gas and the plurality of plasmas into the deposition chamber toward the non-planar substrate includes the steps of:

a) maintaining the deposition chamber at a predetermined deposition pressure, the deposition pressure being greater than a first pressure of the plasma chamber; and

b) expanding the plurality of plasmas into the deposition chamber toward the non-planar substrate.

38. (Original) The method according to Claim 35, wherein the step of injecting a reactant gas into the plurality of plasmas comprises:

a) supplying the at least one reactant gas from at least one reactant gas source to at least one reactant gas injector;

b) passing the at least one reactant gas through a first plurality of orifices in the at least one reactant gas injector proximate to the first plasma and a second plurality of orifices proximate to the second plasma;

c) directing the at least one reactant gas through the first plurality of orifices into the first plasma; and

d) directing the at least one reactant gas through the second plurality of orifices into the second plasma.

39. (Original) The method according to Claim 38, wherein the first plurality of orifices comprises a first predetermined number of orifices and the second plurality of orifices comprises a second predetermined number of orifices, and wherein the first predetermined number is different from the second predetermined number.

40. (Original) The method according to Claim 38, wherein each of the first plurality of orifices has a first conductance and each of the second plurality of orifices has a second conductance, wherein the first conductance is different form the second conductance.

41. (Original) The method according to Claim 38, wherein the step of supplying the at least one reactant gas from a reactant gas source to at least one reactant gas injector comprises:

a) supplying the at least one reactant gas from a reactant gas source to a first reactant gas injector for injecting the at least one reactant gas into the first plasma at a first predetermined flow rate; and

b) supplying the at least one reactant gas from a reactant gas source to a second reactant gas injector for injecting the at least one reactant gas into the second plasma at a second predetermined flow rate, wherein the first reactant gas injector is separate from the second reactant gas injector, and wherein at least one of the first predetermined flow rate and the said second predetermined flow rate is independently controllable.

42. (Original) The method according to Claim 41, further including the step of independently controlling at least one of the first predetermined flow rate and the second

predetermined flow rate such that the first predetermined flow rate is different from the second predetermined flow rate.

43. (Original) A method of injecting at least one reactant gas into a plurality of plasmas generated by an array of a plurality of plasma sources such that a first flow rate of the at least one reactant gas into a first plasma is different from a second flow rate of the at least one reactant gas into a second plasma, the method comprising the steps of:

a) supplying the at least one reactant gas from a reactant gas source to at least one reactant gas injector;

b) passing the at least one reactant gas through a first plurality of orifices in the at least one reactant gas injector proximate to the first plasma, wherein the first plurality of orifices is oriented such that the at least one reactant gas is directed into the first plasma at a first predetermined flow rate; and

c) passing the at least one reactant gas through a second plurality of orifices in the at least one reactant gas injector proximate to the second plasma, wherein the second plurality of orifices is oriented such that the at least one reactant gas is directed into the second plasma at a second predetermined flow rate.

44. (Original) The method according to Claim 43, wherein the step of passing the at least one reactant gas through a first plurality of orifices in the at least one reactant gas injector comprises passing the at least one reactant gas through a first predetermined number of orifices, and wherein the step of passing the at least one reactant gas through a second plurality of orifices comprises passing the at least one reactant gas through a second predetermined number of orifices.

45. (Original) The method according to Claim 44, wherein the first predetermined number is different from the second predetermined number.

46. (Original) The method according to Claim 43, wherein each of the first plurality of orifices has a first conductance, and each of the second plurality of orifices has a second conductance, and wherein the second conductance is different from the first conductance.

47. (Original) The method according to Claim 43, wherein the step of supplying the at least one reactant gas from a reactant gas source to at least one reactant gas injector comprises:

a) supplying the at least one reactant gas from a reactant gas source to a first reactant gas injector for injecting the at least one reactant gas into the first plasma at a first predetermined flow rate; and

b) supplying the at least one reactant gas from a reactant gas source to a second reactant gas injector for injecting the at least one reactant gas into the second plasma at a second predetermined flow rate, wherein the first reactant gas injector is separate from the second reactant gas injector, and wherein at least one of said first predetermined flow rate and said second predetermined flow rate is independently controllable.

48. (Original) The method according to Claim 47, further including the step of independently controlling at least one of the first predetermined flow rate and the second predetermined flow rate such that the first predetermined flow rate is different from the second predetermined flow rate.

49. (Currently amended) A non-planar substrate having a uniform coating deposited on a surface, wherein the uniform coating is deposited by:

a) providing the non-planar substrate having the surface to a deposition chamber, wherein the deposition chamber is in fluid communication with at least one array of a plurality of plasma sources, wherein at least one of the plurality of plasma sources is an expanding thermal plasma source having a cathode, an anode and an inlet for a non-reactive plasma source gas disposed in a plasma chamber, the plasma chamber being in fluid communication with the deposition chamber;

b) evacuating the deposition chamber to a predetermined deposition pressure and the plasma chamber to a predetermined first pressure, wherein the predetermined deposition pressure is less than the predetermined first pressure;

c) generating a plurality of plasmas in the plurality of plasma sources and flowing the plurality of plasmas into said deposition chamber;

d) injecting at least one reactant gas into each of the plurality of plasmas as the plurality of plasmas flows into the deposition chamber such that a first flow rate of the at least one reactant gas into a first plasma is different from a second flow rate of the at least one reactant gas into a second plasma;

e) flowing the at least one reactant gas and the plurality of plasmas into the deposition chamber toward the non-planar substrate; and

f) reacting the at least one reactant gas with each of the plurality of plasmas to form the coating on the surface of the substrate.